

REMARKS

The Official Action of August 2, 2004 has been carefully considered and reconsideration of the application as amended is respectfully requested.

At paragraph 1 of the Official Action, the Examiner has acknowledged the postcard receipt in the parent application which shows that a certified copy of the Russian priority document was duly received therein. The Examiner nevertheless advises that an actual copy of the priority document has not been matched with the file and has requested re-submission of the priority document. Applicants do not have readily available another certified copy, but submit herewith a copy of the priority application.

The drawings have been amended in accordance with the Examiner's request at paragraph 2 of the Official Action.

The specification has been amended to correct an informality in the translation of the application from the Russian priority application. In particular, as shown on the attached translation of page 9 of the Russian priority application, the element identified by reference numeral 3 in the present application is a "water-cooled jacket". This nomenclature is more accurate than "cooling jacket" and would have been clear to one of skill in the art from the application as filed. Applicants have now amended the specification to use the more accurate term and respectfully submit that, since the

correct term would have been clear from the specification as filed, the amendment does not introduce new matter.

The Abstract has been amended in accordance with the Examiner's request in paragraph 4 of the Official Action.

The claims have been amended to remove the bases for the Examiner's objections and rejections at paragraphs 6 and 7 of the Official Action without changing the scope thereof, with the following exception. The transitional phase in claim 2 has been changed from "consists of" to "comprises" so as not to be unduly limiting. New claims 12 and 13 have been added with the "consists of" transitional. All claims as amended are respectfully believed to be sufficiently definite to satisfy the dictates of 35 USC 112, second paragraph.

Claim 1 stands rejected under 35 USC 103(a) as allegedly being unpatentable over Faulkner et al. Applicants respectfully traverse this rejection.

It is well-settled that, to establish *prima facie* obviousness of a claimed invention, the prior art must teach all of the limitations of the claim (see MPEP Section 2143.03). In the present case, it is respectfully submitted that the Examiner has not accurately identified features in the Faulkner et al reference which correspond to all of the limitations in claim 1 as amended.

For example, in the reference, support bowl 24 which the Examiner considers to be chamber, is not the melt-discharge unit shown by item 22 (Fig. 1, 2, column 2, lines 48-49 and 65-66). Applicants particularly note that the reference device actually comprises a **circular** water jacket 38 positioned above supporting chamber 24 on gasket 41 (Fig. 2). Neither jacket 38, nor jacket 24 has the recited U-shaped cross-section. As can be seen from the Faulkner drawings, the cross-section of jacket 38 is annular.

Fig. 2 of the reference clearly shows that circular water jacket 38 has its own lid. Reference numeral 36, which is considered by the Examiner as the discharging unit lid, actually is a positioning refractory block that is the furnace melting zone bottom (Faulkner at column 3 line 4; Fig. 1, 2); it is not a cooling jacket lid .

Hollow cylindrical orifice 44 which the Examiner considers to be a "lug", is according to the Faulkner description, the melt discharge unit, having an annular shape in its transverse horizontal section (Faulkner at column 3, lines 18). In the claimed invention the discharge unit 1 (Fig. 1) is U-shaped in its horizontal cross-section, as is shown in Figs. 1, 2 and 5.

The Examiner contends that the metering needle (reference numeral 42) in Faulkner is monolithic comprising no tubes and a lid. For this reason any circulation of a coolant inside the needle cannot be arranged. But, it is respectfully submitted that unit 28 is nothing else but one of the molybdenum heating elements, and not a lid of

the needle (discharge gate). See Faulkner at column 2, lines 52, 53. Unit 28 indeed has an opening that accommodates, with a clearance, a metering needle. But the cooling coil manifold 48 for discharge of the coolant is not, and cannot be, adjacent to said unit. Coil 48 is intended for cooling the metering needle 42 upper portion to prevent the same from being destructed due to overheating in an acidic environment (see Faulkner at column 3, line 24).

Applicants respectfully note that, in the Examiner's remarks, reference numeral 28 of the patent, which is one of the heating molybdenum elements (Faulkner at column 2, lines 52, 53), is rather arbitrarily termed either as "block 28 with aperture", or as "lid 28".

Applicants respectfully submit that Fig. 2 actually discloses a means for feeding and discharging a coolant into cooling jackets 32 and 38. But, as mentioned above circular water jacket 38 and supporting chamber 24 are different elements of glass-melting furnace 10. Moreover, the presence of discharge pipe 40 in the melt discharge zone would cause failures due to formation of a set glass crust below the discharge device when the melt penetrates between the jacket and manifold 40 and on manifold 40 itself.

In view of the above, it is respectfully submitted that the cited reference does not show all of the claimed elements and, accordingly, cannot be relied upon to set forth even a *prima facie* case of obviousness for the invention as claimed.

Accordingly, it is respectfully submitted that the prior art rejection of record should be withdrawn and that the application is now in allowable form. An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,

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IN THE DRAWINGS:

Please substitute the attached replacement sheet comprising Fig. 5 for the corresponding sheet as filed. The replacement sheet is submitted to address the objection raised at paragraph 2 of the Official Action. A marked-up copy of the original sheet is submitted with a red ink marking to show the change made (deletion of duplicate reference numeral "27").

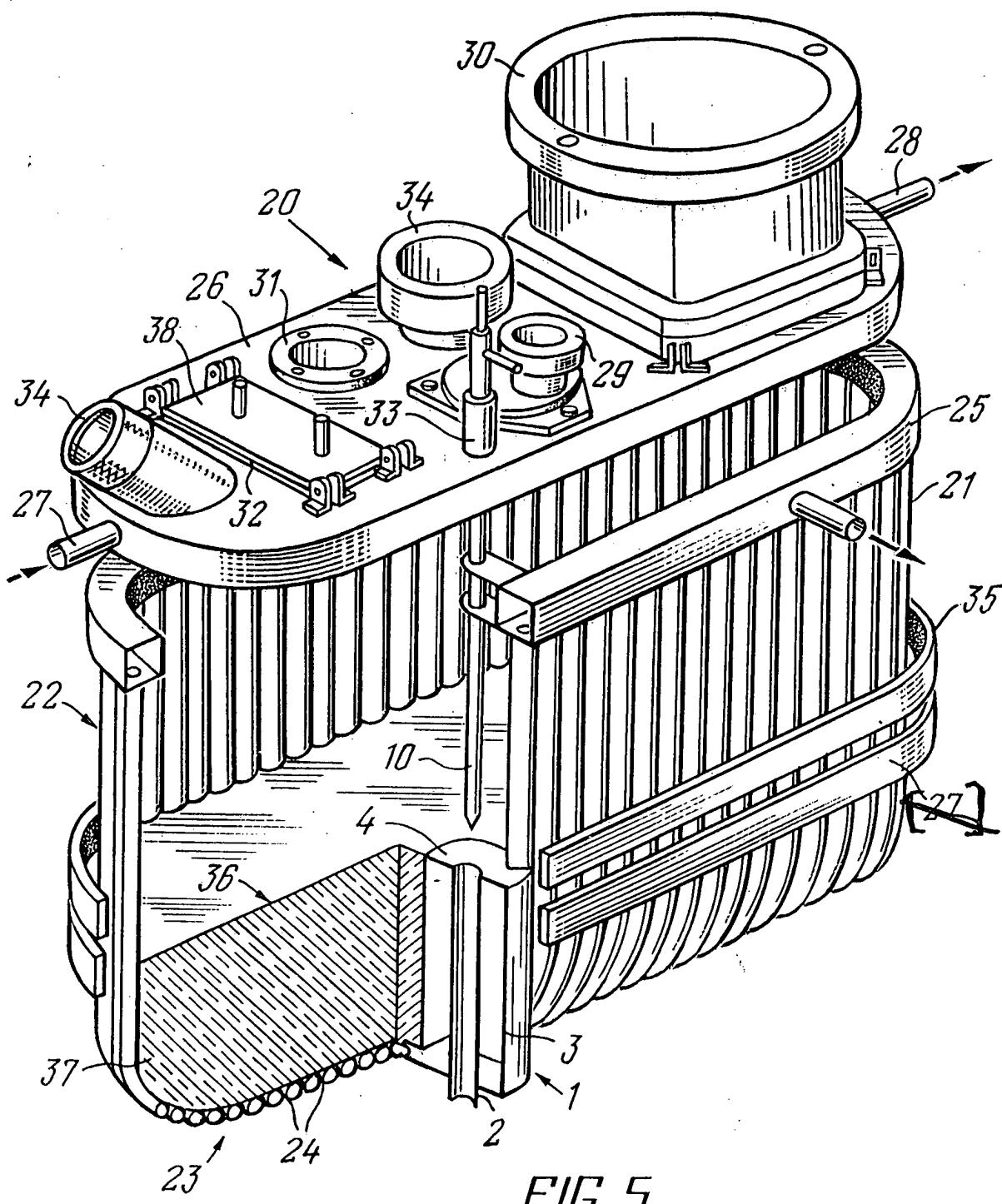


FIG. 5